

**GENERAL**

The 21N12 is a convection cooled mercury vapour thyatron. It has an indirectly heated oxide coated cathode and is intended for use in power supplies and welding equipment, etc.

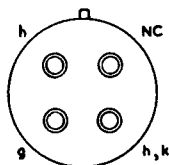
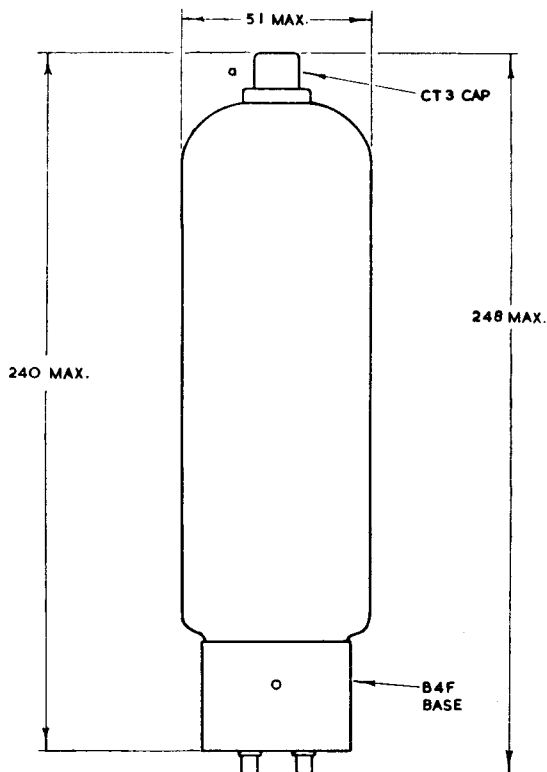
**RATINGS—Absolute values**

|                                                     |                |               |            |
|-----------------------------------------------------|----------------|---------------|------------|
| Heater voltage                                      | $V_h$          | $5.0 \pm 5\%$ | V          |
| †Heater current (nominal)                           | $I_h$          | 5.0           | A          |
| Maximum peak forward anode voltage                  |                | 10            | kV         |
| Maximum peak inverse anode voltage                  | P.I.V.-max     | 10            | kV         |
| Maximum surge peak inverse voltage                  |                | 20            | kV         |
| Maximum anode voltage drop                          |                | 18            | V          |
| Maximum mean cathode current (max averaging 15 sec) | $I_{k(av)max}$ | 3.0           | A          |
| Maximum peak cathode current                        | $i_{k(pk)max}$ | 25            | A          |
| Maximum surge cathode current (0.1 sec)             |                | 250           | A          |
| Maximum grid resistance                             | $R_{g(max)}$   | 100           | k $\Omega$ |
| Maximum supply frequency                            |                | 150           | c/s        |
| Condensed mercury temperature limits                | $T_{Hg}$       | 35 to 70      | °C         |

† The heater must be switched on for a minimum of three minutes before the anode voltage is applied.

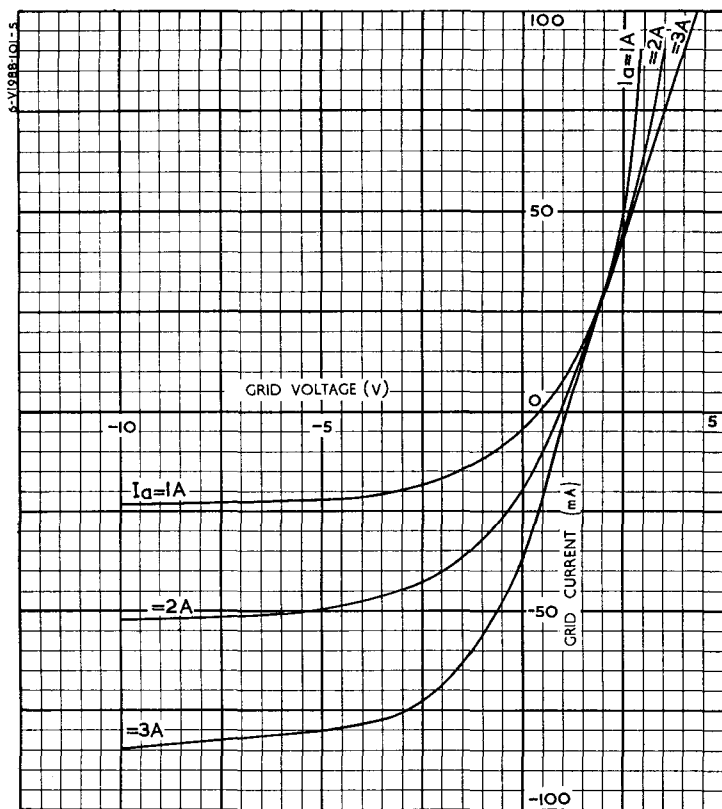
**MOUNTING POSITION—Vertical, base down.****CHARACTERISTICS**

|                                         |       |         |         |
|-----------------------------------------|-------|---------|---------|
| Critical grid current (at $V_a = 6kV$ ) |       | <10     | $\mu A$ |
| Control ratio (nominal)                 |       | 200 : 1 |         |
| Ionisation time (approx)                | $t_i$ | 10      | $\mu s$ |
| De-ionisation time (approx)             | $t_d$ | 1,000   | $\mu s$ |



VIEW OF FREE END.

All dimensions in millimetres.

**CHARACTERISTIC CURVES :  $I_g/V_g$** 



CHARACTERISTIC CURVES :  $T_{Hg}/t$

